

U.S. Patent Application No. 09/736,820
Amendment dated October 4, 2004
Reply to Office Action of July 13, 2004

REMARKS/ARGUMENTS

Reconsideration and continued examination of the above-identified application are respectfully requested.

The amendment to the claims is editorial in nature and is not made in response to the Office Action dated July 13, 2004. The applicants believe that claims 1-21 and 24-30 were quite clear to one skilled in the art. The amendment is not made to overcome any of the Examiner's rejections and does not alter the scope of the claims. Therefore, the amendment is not made for patentability reasons. Full support for the amendment can be found throughout the present application as originally filed, for instance, at pages 2-4 and 6 of the present application. Accordingly, no questions of new matter should arise and entry of the amendment is respectfully requested.

The Examiner, for the seventh time, rejects the claimed invention. The applicants and the undersigned appreciate the Examiner's indication, at page 2 of the Office Action, that the rejection under 35 U.S.C. §102(b) over Bosco and under 35 U.S.C. §103(a) over Bosco in view of Peralt Anstalt have been withdrawn due to the applicants' argument dated June 23, 2004. The applicants and the undersigned believe that in view of the following comments, the claimed invention is in condition for allowance.

At the bottom of page 2 of the Office Action, the Examiner rejects claims 1-6, 19, 20, 22, and 23 under 35 U.S.C. §103(a) as being unpatentable over Del Rincon et al. (U.S. Patent No. 5,694,730) in view of Peralt Anstalt.

The Examiner, in the Office Actions dated February 25, 2002, August 1, 2002, and November 18, 2002, previously rejected the claimed invention over Peralt Anstalt in view of Del Rincon et al. or Del Rincon et al. in view of Peralt Anstalt. In summary, the Examiner indicates that Del Rincon et al. fails to teach or suggest two polymeric planks with a welding agent of

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tetrahydrofuran, a plurality of splines, and a polymeric core with a laminate affixed on the surface of the core. The Examiner then states that Peralt Anstalt describes that the polymeric flooring plank has a polymeric core with a laminate affixed on the surface of the core for the purpose of adjusting the thickness of the seam so that the two planks have a smoother surface. Peralt Anstalt also describes two polymeric planks with a welding agent of tetrahydrofuran for the purpose of connecting two sheets by temporarily dissolving and respectively plasticizing the plastic material so that a connection similar to a welded connection is obtained under pressure. For the following reasons, this rejection is respectfully traversed.

Del Rincon et al. does not relate to the same material as the claimed invention. The claimed invention relates to methods of joining polymeric planks. By contrast, Del Rincon et al. describes wooden planks, such as OSB as noted in the abstract and elsewhere. Wood and/or fiber board is not a polymer, and no combination involving Del Rincon et al. could generate the claimed invention. Additionally, the OSB referred to in Del Rincon et al. is not a polymeric plank, but is a plank made from wood chips connected together by a binder. The binder is only used to bind the wood chips. According to Del Rincon et al., composite materials, such as wood chips, can be embedded in the spline. Most likely, the wood chips are embedded in the spline to make the spline more compatible with the wooden planks. Thus, the planks described in Del Rincon et al. are wooden planks and the splines are made from thermoplastic material that can also include wooden chips. Moreover, Del Rincon et al. does not teach or suggest welding/binding at least the spline and plank together. The thermosetting materials described in column 2, lines 7-10 of Del Rincon et al., are not used as a welding agent to weld/bind the spline and plank together. Instead, the thermosetting materials are the building material of the spline itself.

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Additionally, the splines in Del Rincon et al. are provided with a number of holes so as to drain water, as can be seen by reference to item 32 in Figure 3. Therefore, water would clearly drain through panels connected using the Del Rincon et al. technology. By contrast, one of the preferred points of the present invention is to weld together two planks so as to produce a watertight or water resistant seal, as is generally described at page 2, lines 14-15 and at page 12, lines 12-15 of the present application. Therefore, it is doubtful whether a person of ordinary skill in the art would be motivated to apply the teachings of Del Rincon et al. to another technology. Additionally, the splines of Del Rincon et al. would not produce the same sort of welded watertight joint that is a principal feature of the claimed invention and an advantage over the conventional technology.

Furthermore, the thermosetting material described in column 2, lines 7-10 of Del Rincon et al. teaches away from having at least one solvent capable of welding/binding at least the spline and plank together because the thermosetting materials of Del Rincon et al. have different properties and characteristics than the solvents/welding agent of the claimed invention. When the thermosetting materials of Del Rincon et al. harden, they cannot be softened to fuse two surfaces together or act as a solvent to bind two surfaces together.

Furthermore, it is difficult, if not impossible, to see how organic solvents that would clearly weld polymeric materials together, such as THF, could be used to achieve a similar result with wooden planks. Wood is simply not soluble in organic solvents in the same manner as a polymeric compound. Therefore, it seems implausible that wooden planks could be "welded" to another wooden plank, or to a polymeric plank, using the solvent shown in Peralt Anstalt.

Additionally, references must be evaluated as a whole, and attempts to selectively choose certain elements of the reference (for instance, the splines) generally constitute an impermissible use

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of hindsight. Del Rincon et al. does not teach using any sort of welding agent. In other words, the splines hold the boards together by mechanical or frictional forces. Therefore, a person skilled in the art would have no reason to use a completely different technique, i.e., solvent welding, which is used in the claimed invention, especially because an acceptable solution is already present without solvent welding.

Further, Peralt Anstalt shows a different product that is joined together in a completely different manner. Peralt Anstalt is directed to exterior panels that are used in roofing applications, and the term "overlapping" appears in the text (page 1, lines 16-19) and in the claims. Such a configuration would be typified by the overlapping of shingles on a roof, or clapboard on a house, and this configuration is confirmed by reference to the Figures. Such an overlapping configuration would be essential to ensure a watertight seal in outdoor applications, such as the roofs mentioned in the specification.

By contrast, in the claimed invention, the planks are joined edge-to-edge, with no overlap of any kind, to produce a flat surface. The present wording of the claims does not show the overlapping configuration found in Peralt Anstalt. The claimed invention relates to floor surface covering and the claims specifically mention the welding agent being applied to the "edges" of the planks, as in claim 1. Furthermore, one skilled in the art would not overlap a floor surface covering.

The Examiner is clearly misreading the plain meaning of the language and of the diagrams. Several parts of the reference make it clear that the bonding of Peralt Anstalt is overlapping, rather than edge-to-edge. In particular, the text identified by the Examiner does not support the stated conclusion, since it does show the nature of the bonding, but is instead largely directed to "an apparatus for joining together plastic sheets."

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The final configuration of the planks in Peralt Anstalt is clearly overlapping, not edge-to-edge, as would be found in the present invention. Therefore, as the Examiner acknowledges, Peralt Anstalt relates to top and bottom surfaces, not the edges, which actually receive the bonding agent in Peralt Anstalt.

The "edges" that the Examiner speaks of being overlapping are not really the edges at all; they are portions of the top and bottom faces of the panels. The cited reference does not teach or suggest panels being connected together in any configuration except by an overlapping configuration, which is different from the claimed invention. In the claimed invention, the welding agent is applied to the edges of the planks, not to their top or bottom faces, so as to avoid producing an overlapping structure.

Additionally, it does not seem physically possible to combine the teachings of the two references. Peralt Anstalt concerns overlapping plastic panels, i.e., panels that are joined together in an overlapping manner. By contrast, Del Rincon et al. concerns wooden boards that are joined edge-to-edge, using a spline. Thus, it is physically impossible to place a spline between two panels that are not joined edge-to-edge, and Peralt Anstalt clearly relates to a configuration in which the panels are joined in an overlapping manner. Therefore, the geometrical and spatial requirements of the two references are not physically combinable and, as such, it would not be possible to generate the claimed invention from the teachings of these two references. Moreover, the Examiner had previously found these arguments persuasive to overcome the rejection of the claimed invention over Del Rincon et al. in view of Peralt Anstalt. Accordingly, the rejection under 35 U.S.C. §103(a) over Del Rincon et al. in view of Peralt Anstalt should be withdrawn.

At page 5 of the Office Action, the Examiner rejects claim 27 under 35 U.S.C. §103(a) as being unpatentable over Del Rincon et al. in view of Boultinghouse (U.S. Patent No. 4,666,549).

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The Examiner, for the most part, repeats the rejection of the claimed invention over Del Rincon et al. and Boultinghouse that was set forth in at least one of the previous Office Actions. In summary, the Examiner indicates that Del Rincon et al. fails to describe at least two different solvents capable of at least bonding the edges of the polymeric portion of the plank. However, the Examiner indicates that Boultinghouse describes two different solvents capable of at least bonding the edges of the polymeric portion of the planks for the purpose of providing a permanent welded resinous block copolymer. For the following reasons, this rejection is respectfully traversed.

The arguments set forth above with respect to Del Rincon et al. apply equally here.

The text cited by the Examiner from Boultinghouse (column 1, line 34) does not show the presence of "at least two different solvents." The applicants have not been able to locate the cited language at the identified portion of the patent. There is text in Boultinghouse that refers to "at least one hydroxyl-ether and/or keto-ether" (column 1, lines 45-50) or "at least one keto-ether and/or hydroxyl-ether solvent" (column 3, lines 16-18). While the use of the phrase "at least one" might infer that more than one solvent can be used, the reference does not show the specific support for a mixture of two solvents that the Examiner alleges. In fact, there is no suggestion in Boultinghouse that mixtures of solvents are desirable or yield improved properties at all.

Also, the passage cited by the Examiner (column 3, lines 16-29) also specifically refers to a polymer that is added to improve the viscosity of the welding solution. The Examiner does not explain why this feature is important or how it relates to the number of solvents present. The purpose of the added polymer is to prevent the welding solution from running "off the surface to be welded" (column 3, lines 18-20), so the polymer is merely an additive and thickens the real solvent, not a second solvent. Accordingly, Boultinghouse does not teach or suggest the claimed invention.

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Therefore, the combination suggested by the Examiner does not teach or suggest the use of "at least two different solvents," as required by claim 27 of the present application.

Furthermore, Boultinghouse pertains to the specific case when welding a resinous block of copolymers containing anti-block agents, such as a microcrystalline wax, as set forth at column 1, lines 17-19. Therefore, one skilled in the art by reading Boultinghouse would conclude that the invention of Boultinghouse would only work with resinous block copolymers having an anti-block agent. Del Rincon et al. relates to wood product and is not made of resinous block copolymers and does not contain anti-blocking agents; therefore, one skilled in the art would not be motivated to combine the teachings of the two references. Furthermore, the Examiner had previously found these arguments persuasive to overcome the rejection of the claimed invention over Peralt Anstalt in view of Boultinghouse. As such, for the reasons set forth above, claim 27 is patentable. Additionally, claim 27 is dependent directly on claim 1. Therefore, the reasons set forth above with respect to the patentability of claim 1 would also apply to claim 27. Accordingly, the rejection under 35 U.S.C. §103 over Del Rincon et al. in view of Boultinghouse should be withdrawn.

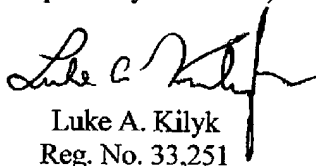
CONCLUSION

In view of the foregoing remarks, the applicants respectfully request the reconsideration of this application and the timely allowance of the pending claims.

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If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,



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